

into the US marketplace. **METHODS:** Generic fluoxetine became available in August 2001. Pharmacy claims data from January 2000 to December 2002 were used to analyze utilization of the SSRI class (consisting of the following: Celexa, Zoloft, Paxil, Effexor XR, Prozac, and fluoxetine). Utilization data for each drug in the class were separated into two group periods, pre- and post introduction of generic fluoxetine. The pre- and post periods consisted of 19 and 17 months respectively. Utilization of Prozac and fluoxetine was used as a reference to compare utilization of other drugs in the class. T-test analysis was used to compare and show differences between pre- and post-periods for each drug. **RESULTS:** Prozac/fluoxetine average monthly prescription utilization for pre- and post-periods were 3434.16 and 4349.56 respectively ($p < 0.001$), which indicates an average increase in monthly utilization by 27%. Celexa average monthly utilization for pre- and post-periods were 1252.95 and 2848.4 respectively ($p < 0.001$), demonstrating an increase in utilization by 127%. Effexor XR average monthly utilization during pre- and post-periods were 908.58 and 2084.38 respectively ($p < 0.001$), indicating an increase of 129%. Paxil average monthly utilization for pre- and post periods were 2834.9 and 4059.6 respectively ($p < 0.001$), indicating an increase of 43%. Lastly, Zoloft's average monthly utilization for pre- and post periods were 3915.05 and 4615.88 respectively ($p < 0.001$), which resulted in an increase of 18%. **CONCLUSION:** In this managed care setting a significant increase in monthly utilization was seen for all drugs with the exception of Zoloft.

NEUROLOGICAL DISEASES/DISORDERS

COST-EFFECTIVENESS OF TOPIRAMATE AS ADJUNCTIVE TREATMENT IN REFRACTORY EPILEPSY—A PROBABILISTIC ASSESSMENT OF TREATMENT STRATEGIES

Remak E¹, Hutton J², Price M³, Peeters K⁴, Adriaenssen I⁴

¹MEDTAP International, Inc, Budapest, Hungary; ²MEDTAP International, London, United Kingdom; ³Janssen-Cilag, High Wycombe, Bucks, United Kingdom; ⁴Johnson & Johnson Pharmaceutical Services, Beerse, Belgium

OBJECTIVES: Adopting new medical therapies is a complex decision that must take into account many factors, including differences in efficacy, tolerability, safety, and costs. Long-term comparative trials, especially among newer antiepileptic drugs (AEDs), are lacking, therefore decision models are needed to guide treatment decisions. We aimed to develop an economic model of the treatment of refractory epilepsy in the UK, and to assess the cost-effectiveness of topiramate as adjunctive treatment in refractory epilepsy compared to other newer AEDs. **METHODS:** A Markov model was developed to combine data from published clinical trials, cost-of illness

studies, epilepsy-related mortality surveys, and utility studies. The expected costs and utilities associated with possible treatment strategies (1st and 2nd line add-on treatments) for newly diagnosed epilepsy patients with partial seizures were calculated and compared. In those patients requiring a second-line add-on, it was assumed that the first-line add-on treatment was stopped. A probabilistic analysis was undertaken and the cost-effectiveness frontier mapped. **RESULTS:** First and second-line adjunctive treatment with topiramate followed by levetiracetam was the least costly add-on strategy, and this strategy had the highest probability of being cost-effective at currently accepted values of the ceiling ratio ($<£30,000/QALY$). Levetiracetam first-line, followed by topiramate second-line generated additional QALYs, but was more expensive, and was optimal only if the ceiling ratio fell between £30,000 to £60,000/QALY. Scenarios combining sequences of topiramate and lamotrigine deliver a few additional QALYs at substantial additional costs (became optimal only if the ceiling ratio was $>£60,000/QALY$), while adjunctive treatment with levetiracetam and lamotrigine are both more expensive and generate less QALYs than the other scenarios, therefore cannot be preferred. **CONCLUSIONS:** This model suggests that topiramate first-line adjunctive treatment followed by levetiracetam second-line (or vice versa) are cost-effective treatment strategies in patients with partial seizures refractory to other treatments.

ND2

AN ESTIMATE OF THE DIRECT COSTS OF MIGRAINE IN THE UNITED STATES USING THE MEDICAL EXPENDITURE PANEL SURVEY

Mychaskiw MA, Sankaranarayanan J

Purdue University, West Lafayette, IN, USA

OBJECTIVES: As sales of anti-migraine prescription medications increased by more than 10-fold between 1994 and 1999, it is important to quantify the impact on the cost of migraine treatment. The objectives of this study were to determine the direct costs of migraine in the U.S. population and to stratify those costs by type of medical care. **METHODS:** Retrospective analysis was conducted of the 1999 Medical Expenditure Panel Survey. The survey provided data from a nationally representative sample of 24,618 respondents and their medical care and health insurance providers. Data utilized in this study included medical conditions and use and payments for medical care. Migraineurs were identified using ICD-9-CM codes and direct costs were calculated using patient and third-party payments for migraine related medical events by type of medical care. Sample estimates were projected to the population and 95% confidence limits were calculated using the Taylor expansion method. **RESULTS:** Direct costs incurred per migraineur were \$293. Total direct costs of migraine were \$1,429,053,413. The highest proportion of these costs

ND1